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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/604,643

08/06/2003

Kuo-Cheng Chen

HTCP0011USA

1642

27765

7590

09/09/2004

NAIPO (NORTH AMERICA INTERNATIONAL PATENT OFFICE)

P.O. BOX 506

MERRIFIELD, VA 22116

EXAMINER

A, MINH D

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/604,643	CHEN ET AL.	
	Examiner	Art Unit	
	Minh D A	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 10, and 12 are rejected under 35 U.S.C. 102(b) as being unpatentable by Kaiponen et al (US 6,469,673).

Regarding claim 1, Kaiponen discloses an antenna circuit arrangement connected to a circuit board for wireless communication, the antenna comprising: a radiator (106 or 316) used to transmit and receive radio frequency (RF) signals, the radiator being perpendicular to a ground plane (18 or 105 or 318) of the circuit board (334)', a feeding plate stretching out from the radiator and connected to a feed pad of the circuit board (102 or 334), used to transmit the RF signals', and a ground plate (108) stretching out from the radiator(106) and connected to the ground plane (105 or 318). See the feed point of the radiator connected with a pin (312) to print wire circuit board on figures 1-8, col.1, lines 31-67 to col.6, lines 1-5.

Regarding claim 2, Kaiponen discloses the radiator (106 or 316) is installed to the side of the circuit board (102). See figure 2.

Regarding claim 3, Kaiponen discloses wherein the radiator (106 or 316) is installed above the circuit board (102 or 334). See figure 3.

Regarding claim 4, Kaiponen discloses the feeding plate (104) and ground plate (105) are connected on the same side of the radiator (106). See figure 2.

Regarding claim 5, Kaiponen discloses wherein the feeding plate (104) and ground plate are connected on different sides of the radiator. See figure 2.

Regarding claim 6, Kaiponen discloses an expanding plate (716) stretching out from a side of the radiator. See figures 7a-7c.

Regarding claim 7, Kaiponen discloses wherein the feeding plate stretches out from the upper edge (519) of the radiator (516). See figure 5.

Regarding claim 10, Kaiponen discloses wherein the ground plate of the radiator stretches out from the lower edge of the radiator. See figure 5.

Regarding claim 12, Kaiponen discloses wherein the circuit board is a printed circuit board (PCB). See figures 2-3.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 8-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable by Kaiponen et al (US 6,469,673).

Regarding claims 8-9, Kaiponen discloses the claimed invention except for the feeding plate stretches out the upper or lower edge of the radiator. It would have been

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an obvious matter of design choice to employ a upper or lower edge of the radiator, since applicant has not disclosed that the feeding plate stretches out the upper or lower edge of the radiator solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the feeding plate stretches out the upper or lower edge of the radiator.

Regarding claim 11, Kaiponen discloses the claimed invention except for the length of the radiator is approximately quarter the wavelength of the RF signal transmitted by the antenna. It would have been an obvious matter of design choice to employ the length of the radiator is approximately quarter the wavelength of the RF signal transmitted by the antenna since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Deming et al (US 5,734,350) and Hagiwara et al. (US 5,767,810) are cited to show an antenna device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 –2:30 PM).

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone numbers for

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the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and (703) 872-9319 for final communications.

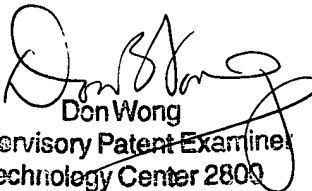
Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-1553.

Examiner

Minh A

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9/2/04


Don Wong
Supervisory Patent Examiner
Technology Center 2800